



VOICE OF THE DIABETIC

A SUPPORT AND INFORMATION NETWORK

The Diabetic Division of The National Federation of the Blind

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That's How I See Things Today

How I Went Blind And Then What

by Ed Bryant

Diabetes is a sneaky disease and usually it takes fifteen to twenty years before chronic complications will be noticed. There are many possible ramifications of the disease. Today I will share with you my eye experiences and some observations on blindness.

I have early onset diabetes which was diagnosed some twenty-nine years ago. After the initial shock of discovering I had sugar diabetes and after learning how to give myself insulin injections, my lifestyle returned to one of a very busy and active teenager. The only difference was that I had to give myself one shot a day and I was told I should watch my diet and not eat a lot of sweet food because, over a period of time, this could cause problems. I did not adhere to good diabetic practices and I was not good at watching what I ate and drank.

I did what all my peers did and felt just fine. I was not worried about my diabetes. After having the disease almost sixteen years, I began to notice some blurred vision. It was like looking through a smoky haze. I was the Administrative Manager for the division of a corporation that specialized in child photography. My job in St. Louis required a lot of paper work

so it was helpful for me to see clearly. At first, I didn't think much about my blurred vision, as I assumed that it was just a case of seeing an eye doctor and getting a pair of glasses. I did not get glasses, and as time passed, to my dismay, my vision progressively deteriorated. Finally, I had to admit I was just being foolish and needed to see a retina specialist.

After seeing an ophthalmologist I learned that I had proliferative diabetic retinopathy and that I had no functional vision in one eye and prognosis for the other eye was not good. The doctor recommended I see a diabetes specialist and get my disease under good control. Then, if possible, he could give me laser treatments.

I immediately made an appointment with a doctor who specialized in diabetes and began to regulate my disease very strictly. After a time, with my diabetes being in perfect control, the vision in my one eye became substantially better. I was, of course, elated because I could see well enough to do almost anything I wanted. (While in the photography field, I had driven in every state in the continental United States and thought driving an automobile was essential to everyone's lifestyle.) I

could even drive my little blue sports car again.

After revisiting and consulting my ophthalmologist, we decided I should have vitrectomy surgery in my one bad eye. Hopefully, the surgery would restore some of my vision. The surgery was performed on my one bad eye, to no avail, as I still could not see. A few months later, a second vitrectomy was performed on the same eye; again, the results were negative. I knew that, by law, I was legally blind even though I didn't consider myself as blind because I had little trouble getting around and doing what I wanted to do. During the daytime, I had no trouble unless I was walking directly into bright sunlight. The times I had difficulty were at night. Unless an area was well lit, I had extreme difficulty in seeing where I was going. One evening I had been out and it was quite late when I decided I should head home. It was only a few blocks. So, I decided to walk because the location from where I began walking was well lit. As I continued walking, there were fewer and fewer street lights; I could barely see where I was going. At one point where the sidewalk was quite wide, the landscapers had planted a preposterously huge tree directly in the middle of the sidewalk. I was walking along at a pretty good clip, and, sure as heck, I ran into the tree. After having a very frank encounter with the tree, I walked the remaining four to five blocks to my residence. It's my belief that we should have a sense of humor. When I reminisce about days gone by, I always think about my friendly encounter with "the tree" and I laugh. If I had had more wisdom, I would have been using a long white cane. Had I been using a cane, I would not have run into the tree and any possible injury would have been circumvented.

A couple of years later, my job position was phased out and I found myself unemployed. I moved to Columbia, Missouri, site of the University of Missouri, and tried to decide where to go from there. I had been offered positions with several different companies on an upper-middle management level

Inside This Issue

That's How I See Things Today by Ed Bryant	1
A Veritable Explosion of Activity by Marc Maurer	1
As Years Go By by Dolores Olson	2
We Are Changing What It Means To Be Blind	2
Ask Dr. James by Ronald James, M.D.	3
Oral Insulin Pill in the Works	3
Sweetener Facts by Karen Derrick, R.D.	3
Valentine Heart Candy Wreath Fund Raising Project	4
Recipe Corner	5
What Is Diabetic Retinopathy? by Ed Bryant	6
What You Always Wanted to Know But Didn't Know Where to Ask (Resource Listing)	8
Tidbits and Humor	8

A Veritable Explosion of Activity

by Marc Maurer

If you take enough uranium of a certain kind, and purify it, and concentrate it in one place, it will explode with vast quantities of energy released. During the last year, we in the National Federation of the Blind have concentrated energy and resources on the problems faced by diabetics. The result has been a veritable explosion of activity. I receive letters almost daily complimenting us on the work we do in our Diabetic Division.

The National Federation of the Blind is unique. It cares what happens to the blind, it believes that blind people can make a difference, and it plans specific action to make the difference come true. The work of the Diabetic Division and the newsletter we publish through this division demonstrate

exactly how this works. Who knows more about the problems faced by blind diabetics than blind people with diabetes? Of course, the answer is that no one does. So, when we decided to try to have a greater effect upon the lives of blind people with diabetes, we concentrated our resources in the hands of blind diabetics. Today, we know that this was the right thing to do because it worked.

Recently, I met a woman in New York who told me that her life had been changed because of our work in the Diabetic Division. She was ready to give up, but with our advice and assistance she changed her mind, rediscovered her own self-worth, and is now happily back at work. And this is only one example.

There is power in collective action and focused activity. The Diabetic Division Newsletter is but one year old. Already it has reached out and touched the lives of many blind people. There is ever so much work remaining to be done. I am sure that the years to come will show even more positive results.

My faith is based upon my knowledge of the people involved. When there is a problem to solve, we of the National Federation of the Blind are able to muster the strength and commitment to do it. Therefore, let us go forward to find still more blind people whose lives need encouragement. Let us do it with the joy and the will which are so characteristic of the National Federation of the Blind.

(Continued on page 4)

As Years Go By

by Dolores Olson

(Editor's Note: This article first appeared in the April 1984 issue of "The Sharp Shooters' Bullet 'In," a newsletter which is published by a diabetic support group in and around Tempe, Arizona. It is reprinted here with the permission of its writer, Dolores Olson.)

We asked a very special member of our group, who has been an inspiration to us all, to write a little about what being a diabetic for 52 years has meant to her. She graciously complied and "jotted down a few thoughts." We thought that it was worth printing in its entirety:

After 52 healthy years with diabetes, I am convinced that it is possible to be healthier with diabetes than without it — providing one follows the doctor's advice and adheres strictly to the diet-insulin-exercise regime. (Really, it is a lifestyle which every human being would do well to follow.) My diabetes was diagnosed when I was 12 years old and for two years my doctor prescribed a low carbohydrate diet without insulin, which was not conducive to proper growth. He then prescribed insulin, which had been discovered only 11 years before I became diabetic. That was 50 years ago, and I have fared very well ever since. When I entered college, I arranged to eat in the cafeteria rather than in the dormitory dining hall, so that I could select my foods more carefully. After graduation, I taught public school music before marrying the wonderful man with whom I have lived for 41 years. One of the greatest assets for a diabetic is complete family support. My husband has been very caring and concerned about my health and has been perfectly willing to eat whatever foods are best for me. He can often detect an oncoming insulin reaction before I am even aware of it myself — by the look in my eye or slowness in responding to his questions.

We have a lovely daughter who is 35 years old and two grandsons (9 and 3 years of age). At present none of them has diabetes. I know of two cousins on my paternal side who developed diabetes later than I did.

After marriage I was employed as a secretary in five different locations until I retired in 1979. I never experienced any job discrimination because of diabetes. The only time I was absent from work due to diabetes was during the period of laser treatments for diabetic retinopathy, the only complication I have ever had.

My diabetic retinopathy started after 45 years with diabetes and has been successfully treated with laser photocoagulation. The retinal specialist considered it to be pri-

marily caused by the duration of my diabetes rather than lack of control.

I feel that the major ingredients for good control are common sense and willpower. Learn as much as you can about diabetes — in a way we have to be our "own physicians" and be able to handle ourselves in any situation. We must learn to control our diet and insulin fluctuations. My dosage has fluctuated over the years by only a few units. I weigh the same as I did in my teens — about 112 lbs. Ten years ago I found that my age and activities required "less fuel" than before, so I gradually decreased my diet from 2100 calories to approximately 1500 calories per day.

Always inform your friends and associates that you are diabetic. Educate them about your potential for hypoglycemic reactions, so they will know what to do in the event you need help. It could save your life — it has saved mine! My favorite snack to carry with me at all times has been Brach's individually wrapped soft candy — or more recently, a packet of Monojel.

Wear an identification bracelet or chain. This also could save your life in the event of an accident.

Rotate your injection sites on a systematic basis. I have been fortunate to require only one daily injection, but even so, for 50 years that amounts to 18,250 shots!

Maintain a health diary on yourself. Even though the doctor may have your health history, you will find it valuable over the years to refer to your own handy diary. Keep a record of your insulin changes, any health problems, etc. Over a 52-year span, we have lived in many different areas and consulted many doctors, but I always have my own diary for reference.

Now there are so many educational opportunities for diabetics which did not exist 50 years ago. My chief source of information over the years has been the ADA Forecast, to which I have subscribed since about 1948, when this publication was in its infancy. More recently the "Diabetes in the News" published by Ames has been an excellent source of information. The American Diabetes Association "Family Cookbook" is really great for the entire family. Now this "Sharp Shooters Bullet 'In" is terrific and the editors really deserve a lot of praise for their accumulation and dissemination of information. The Diabetes Support Group Meetings are very informative.

If your child is the diabetic, send him/her to a diabetic camp to mingle with others who have a similar problem, to learn the benefits of knowledge and self-care, and to have fun. When I was a child, there were no diabetic camps. I did not know another diabetic until I was in

college.

With all the recent improvements in treatment of diabetes (such as self blood glucose monitoring) you have the advantage of much better control than existed before, resulting in even greater potential for a long, happy life with diabetes. Since I have fared very well on the old method of urinalysis testing and blood sugar every three months, my doctor agrees that we need not change my method of control at the age of 64. (See attached addendum.)

If I had a choice of serious illness, I would still choose diabetes. We have the power to control it so much easier than those who have cancer, heart disease, or countless other ailments. It is not exactly a normal life — but then whose life is?? — Dolores Olson (3/84)

We Are Changing What It Means To Be Blind

BLIND COLLEGE STUDENT, FELLOW, INSTITUTE FOR EDUCATIONAL LEADERSHIP, WASHINGTON, D.C.: "I grew up ashamed to admit that I was blind. I thought that blind people begged or worked in a sheltered workshop or lived on welfare. Because I refused to carry a cane, I was afraid to cross the street by myself. Meeting successful, employed blind people from all walks of life through the National Federation of the Blind helped me to believe in myself. Through their encouragement I returned to school and am working on my doctorate."

BLIND SISTER OF ST. FRANCIS OF ASSISI, REHABILITATION TEACHER, ALCOHOL COUNSELOR, MILWAUKEE: "The NFB is very much a priority in my life. I need to be with people who have a positive philosophy about blindness. It's discouraging to feel alone, with people who stereotype and underestimate me. The NFB helps blind people believe in ourselves, motivates us to go out and help the other guy. Federationists are in this because we want to help other people."

AMERICAN ADOPTION AGENCY: "You cannot know how wonderful it is to get some adequate information to share with families adopting blind children from Korea. We appreciate so much the complimentary copies that you sent us (*A Resource Guide for Parents and Teachers of Blind Children*, recently published by the NFB) and we'll certainly refer parents to you."

BLIND ELEMENTARY SCHOOL TEACHER, SMALL TOWN, CALIFORNIA: "If it were not for the NFB I wouldn't have a job. In 1954 the NFB gathered the statistics about blind teachers looking for jobs and

ADDENDUM TO ARTICLE ON DIABETES IN APRIL 1984: Since writing the above article in 1984, I have converted to home blood glucose monitoring with an ACCU-CHEK meter. Now I realize that it is the best improvement in diabetes control since the discovery of insulin! It gives a diabetic the opportunity to monitor blood sugars daily and adjust diet, insulin and/or exercise accordingly. It was a pleasure to learn that at least one company has developed a self blood glucose meter with electronic voice (listed on page 9 of the Jan./Mar. issue of "The Diabetic Support Network" publication). This can give the visually impaired the great opportunity to independently test their own blood sugars, too.

— Dolores Olson, April 1986

got the law rewritten so that vision wasn't required for a physical. Hopefully some day we will have educated enough of the public that we blind people can walk down the streets and be treated like anybody else."

ELDERLY AMERICAN, INDIANA: "I want to thank you for the letter and kind thought that your Federation had for my wife's troubles. She has lost 85% of her sight and the doctor tells us that she could lose all of it. Now after reading your letter we contacted the public library and are now receiving talking book records and a player to handle them."

BLIND SHELTERED SHOP WORKER, UTAH: "I have made brooms in a sheltered workshop for 18 years. Every day I take the bus 40 miles each way and make just enough money to pay for my bus fare. Why do I work? I am like many older blind people. I haven't had very many opportunities and I want to contribute to society. It is better than sitting at home with nothing to do. I never heard of the NFB until recently. The NFB visited our shop and is trying to improve wages for blind shop workers."

When you become an associate contributor to the National Federation of the Blind you are helping 50,000 blind people in our work to help all blind Americans. You are not being charitable toward an agency or toward poor, helpless blind people. Blind people in YOUR community need the NFB, need to know about us, need us to assist them when they face discrimination or can't get the services and training they need. Blind children need to have the seeds of positive attitudes about blindness planted at an early age. Help us to change what it means to be blind. Thank you.

Ask Dr. James

by Ronald James, M.D.

(Please Note: If you have any questions for Dr. James please send them to the editor. The only questions Dr. James will be able to answer are the ones used in his column.)

QUESTION 1: My 13-year-old son takes insulin and it "scares me to death" everytime he wants to go out and play football or some other sport with other kids. I know I hold him back from doing things other kids do and it is creating family problems. I am told that he can do the same things that other children do and still not have insulin reactions that might hurt him. Can my son handle physical activities as a diabetic? What safeguards should be followed?

Answer 1: Your son is capable of participating in vigorous sports and should be permitted to do so just like any other comparable 13-year-old boy who does not have diabetes. Making him different by not letting him do so, may be very depressing for him and can do considerable psychological damage. Almost everyone who takes insulin will sooner or later have an insulin reaction. In most cases he will be able to recognize the reaction and can simply treat it by taking something sweet. If your son does not recognize an insulin reaction, the worst that can happen will be for him to black out and/or have a convulsion. When playing sports, others will be present who can either help him or call for medical help.

It is important for him to be prepared for an insulin reaction by having available sugar in some form and by letting those around him including his coach (if there is one) know he has diabetes and what to do. One should also attempt to prevent reactions during sports by taking extra food or less insulin. Exactly how to do this should be discussed with one's personal physician.

QUESTION 2: Some people say that urine sugar tests are OK and others say that glucose tests should be used. What is the difference between urine sugar testing and blood sugar testing?

Answer 2: Both urine and blood sugar testing have a place, depending on what information one desires. A blood sugar indicates the exact level of diabetes control at the moment the test is done but tells nothing about what it was over the past several hours. It will detect low as well as high blood sugar levels. Urine tests indicate whether the blood sugar level, at which one spills sugar into the urine — the renal threshold, has been exceeded. It gives information over a period of time, that is since last voiding. It does not de-

fect low blood sugars and only tells if the blood sugar has exceeded the renal threshold. For older people this may be 300 to 400 mg%, making the test of little value. Which method to use should be discussed with one's physician.

QUESTION 3: Why do some women when pregnant have to begin using insulin and then after delivery, they no longer need insulin?

Answer 3: In some women pregnancy brings on diabetes, called gestational diabetes. In others, already diabetic, it raises the blood glucose levels. These changes are due, at least in part, to changes in hormones associated with the pregnancy. In either case, these women need a diabetic diet. The oral agents (diabetes pills) should not be used because of potential bad effects on the fetus. For the baby, it is very important to keep mother's blood glucose as near normal during pregnancy as possible. Therefore, many of these women will need insulin during pregnancy. After delivery, the factors associated with pregnancy that raise blood glucose go away and insulin may no longer be needed.

QUESTION 4: I am interested in the statistics on how long an insulin dependent diabetic lives after the disease is diagnosed? I think it important that we, the diabetic population, know these facts. We all like to think of ourselves as survivors, so, what can we do to increase our life spans as diabetic persons?

Answer 4: How long an insulin dependent diabetic will live after diagnosis is difficult to answer because: a) it is not easy to find much information regarding this subject, b) answers are only averages and

most individuals differ from the average, c) it decreases with age of onset, and d) with time treatment of diabetes and thus survival is improving, making it impossible to know how long a diabetic will live in the future. Some statistics suggest that those diagnosed at age ten years can expect to live, on the average, about another 40 years. Another way of estimating survival is to multiply the expected duration of survival in the general population (life expectancy minus age at onset of diabetes) by 2/3. Thus a 20-year-old male diabetic would expect to live for (72 years — 20 years) x 2/3 equals 35 years after diagnosis.

Several things can be done to in-

crease one's life span:

a) Select long lived parents (Of course we cannot do this. We take what we get.)

b) Control the diabetes well

c) Maintain normal weight

d) Do not smoke

e) Exercise regularly

QUESTION 5: Some diabetics claim that insulin requirements are lower during menstruation. Please comment.

Answer 5: Insulin requirements in relation to menstruation may be lower during menstruation but will vary from one lady to another. Usually they will be increased for a few days premenstrually and return to normal one to several days after the onset of menses.

Sweetener Facts

by Karen Derrick, R.D.

People who have diabetes should be aware that sugar comes in many forms. Words ending in "ose" are words that are often other names for sugar. Sucrose, or ordinary table sugar, is a combination of two sugars, glucose and fructose, bonded together in equal amounts. Fructose, which occurs naturally in many foods (particularly fruits, honey, and sucrose) is a controversial subject because it has sometimes been labeled as a safe sweetener for diabetics. Fructose is as sweet or sweeter than sucrose and seems to cause less of a rise in blood sugar because it is absorbed more slowly. However, in poorly controlled diabetes, fructose is quickly converted into glucose by the liver, which will quickly raise your blood sugar levels.

Sorbitol, mannitol, and xylitol, often called sugar alcohols, are used in many products such as dietetic chewing gums and candies. They do contribute about the same number of calories per gram as sucrose. They are absorbed into the blood more slowly than sugar. However, in the person who has poorly controlled diabetes, these sugar alcohols are likely to cause a significant blood sugar rise. All three of these sugar alcohols can cause diarrhea if eaten in large amounts.

The only non-caloric sweeteners that contain no carbohydrates are saccharin and cyclamates. They do not contain any calories and therefore do not cause a rise in blood sugars. Cyclamates, produced by Abbott Laboratories, are thirty times as sweet as sucrose. Saccharin, produced by Sherwin Williams Co., is about three hundred seventy-five times sweeter than sucrose. Most people prefer cyclamates because they do not have the bitter aftertaste characteristic of saccharin. Cyclamates are currently not available in the United States. In 1970 the FDA removed cyclamates from the market after blad-

der tumors developed in rats and mice fed cyclamates. Abbott Laboratories is currently petitioning to remarket cyclamates and the FDA is expected to reach a decision soon. Saccharin safety has been questioned because of its link to bladder cancer in laboratory animals. Since 1977 the FDA has proposed a ban on saccharin. Products containing saccharin must contain the warning, "Use of this product may be hazardous to your health. This product contains saccharin which has been determined to cause cancer in laboratory animals." Saccharin is currently available in a variety of "dietetic" products in the United States. The biggest disadvantage is that to many people it causes a metallic aftertaste.

Aspartame (Nutra Sweet) produced by U.D. Searle & Co. is a protein sweetener that is 180 to 200 times as sweet as sucrose. Technically, aspartame contains calories; however, because it is so sweet the amount necessary for use in a serving of food is likely to supply almost no calories. Equal, which contains some dextrose and dried corn syrup, is the only granulated table-top form of aspartame. Aspartame's main advantage is that it tastes very much like sugar and it has no aftertaste. The main disadvantage of aspartame is that it cannot be used in cooking, broiling, baking, or frying because it becomes unstable when heated. Aspartame breaks down into aspartic acid, phenylalanine and methanol, all of which occur naturally in many foods. Aspartame has been the most thoroughly tested food additive prior to approval by the FDA. There has been some question that it may lead to brain tumors in laboratory rats and might lead to brain damage in humans. However, it has been cleared on both counts after recent studies. People with phenylketonuria (PKU) should be alerted that aspartame does contain phenylalanine. In people who have PKU, phenylalanine may lead to mental retardation.

(Continued on page 4)

Oral insulin pill in the works

Editor's Note: The following article was published on August 29, 1986 in the *Rapid City Journal* from Rapid City, South Dakota:

WASHINGTON (AP) — Researchers say they have developed a method that someday may allow diabetics to take insulin orally instead of through injections, a goal that has eluded scientists for decades. The technique, which involves sealing insulin-containing capsules in plastic film to protect them from the digestive system, could eliminate the daily needle pricks a minority of diabetics must endure, the researchers say.

In a report published Friday in the journal *Science*, scientists at Bowling Green State University and the Medical College of Ohio say the approach also might be useful in treating cancer and other diseases of the colon, the destination of the capsuled medicines.

Sweetener Facts

(Continued from page 3)

This warning is printed on the label of products containing aspartame. Experts say that some persons may be very sensitive to aspartame and should avoid using it.

Anyone concerned about how safe any sweetener is, should not use much of any one kind. The American Diabetes Association recommends that aspartame consumption be limited to 50 milligrams per every kilogram of your body weight. G.D. Searle's testing often used 34 milligrams per kilo-

gram as the upper range of recommended intake and used 100 to 200 milligrams per kilogram as their abuse doses. One twelve-ounce can of Diet Pepsi contains 1.77 milligrams of aspartame. This means that a 58-kilogram (128-pound) person could consume 16 of the twelve-ounce cans of Diet Pepsi a

day.

Reading food labels can be confusing. It's important to know what to look for in a label. In particular, remember that ingredients are listed in order of their weight in a product. If sugar is near the beginning of the list of ingredients, it is a good bet that the product contains a lot of sugar. Only one sugar listed near the end of the ingredient list may not be a problem. However, if sugars are named separately, the combination may equal a lot of sugar. If you are not sure if a food has too much sugar in it, check with your dietitian. Also, remember that "sugar-free" or "sugarless" just means that the food does not have any sucrose or table sugar in it, but it still may contain some other form of sugar. The sweeteners you use should be decided by you, your dietitian, and your physician.

SUGAR SUBSTITUTE EQUIVALENTS

Brand Name	Substitution for sugar	Brand Name	Substitution for sugar
NON-CALORIC SWEETENERS			
Fasweet Liquid		Zero-Cal Liquid	
1/8 teaspoon	= 1 teaspoon sugar	10 drops	= 1 teaspoon sugar
1/3 teaspoon	= 1 Tablespoon sugar	30 drops	= 1 Tablespoon sugar
1 Tablespoon	= 1/2 cup sugar	1 Tablespoon	= 1/2 cup sugar
Sucaryl Liquid		X-tra Touch Liquid	
1/8 teaspoon	= 1 teaspoon sugar	1/8 teaspoon	= 1 teaspoon sugar
1/3 teaspoon	= 1 Tablespoon sugar	1/3 teaspoon	= 1 Tablespoon sugar
1 Tablespoon	= 1/2 cup sugar	1 Tablespoon	= 1/2 cup sugar
Supersweet Liquid		CALORIC SWEETENERS	
4 drops	= 1 teaspoon sugar	Equal Granulated	
1/8 teaspoon	= 2 teaspoons sugar	1 packet	= 2 teaspoons sugar
1/8 teaspoon + 4 drops	= 1 Tablespoon sugar	1/2 packet	= 1 Tablespoon sugar
1/2 teaspoon	= 1/2 cup sugar	12 packets	= 1/2 cup sugar
1 Tablespoon	= 1 cup sugar	Sugar Twin Granulated	
Sweet 'n Low Liquid		1 teaspoon	= 1 teaspoon sugar
1/8 teaspoon	= 1 teaspoon sugar	Sweet 'n Low Granulated	
1/3 teaspoon	= 1 Tablespoon sugar	1/10 teaspoon	= 1 teaspoon sugar
1 Tablespoon	= 1/2 cup sugar	1/3 teaspoon	= 1 Tablespoon sugar
Sweet Magic Granulated		1 Tablespoon	= 1/2 cup sugar
1 packet	= 2 teaspoons sugar	Sweet 'n Low, Brown	
1/2 packet	= 1 Tablespoon sugar	1/4 teaspoon	= 1 Tablespoon
12 packets	= 1/2 cup sugar	brown sugar	
Sweet 10 Liquid		2 teaspoons	= 1/2 cup brown sugar
10 drops	= 1 teaspoon sugar		
30 drops	= 1 Tablespoon sugar		
1 Tablespoon	= 1/2 cup sugar		

That's How I See Things Today

(Continued from page 1)

with a very lucrative salary. The jobs were available until I told the prospective employers I was legally blind or had a severe eye problem. It didn't matter that I could do the work just as proficiently whether I was blind or sighted. It didn't matter that I was very accomplished in business administration and public relations. When the words blind or legally blind were used, there was an instantaneous reconstruction of the wording — in essence the job was no longer available or they offered it to me at wages of less than half of the original offer.

When in Columbia, I went out one night with a friend who accidentally jabbed a finger into the eye I could see out of. Instantly, I felt excruciating pain. I visited my ophthalmologist who told me I had a serious problem and needed to immediately see a retina surgeon in Memphis, TN. The retina specialist told me the eye was in bad shape; however, he thought vitrectomy surgery might help. Once again, I underwent surgery. The only thing it did was allow me to see in a very limited way. In the next couple of months, I lost all my vision. So what was I to do now? I was totally blind; I lived in an apartment and really had no way to get anywhere.

A newly blinded person — regardless of the cause — faces many new problems among which are management of personal affairs, personal checking and/or savings accounts. After having managed my personal business matters, and after having been independent for years, I found it very difficult to let someone else be-

Valentine Heart Candy Wreath Fund Raising Project

Editor's Note: The following fund raising idea is used by the South Dakota Black Hills Chapter of the National Federation of the Blind. (They also make a Christmas wreath with very good results. Please contact Karen Mayry for details on how to construct the Christmas wreath.)

- Items needed to make wreath:
 - Used coat hangers — can be obtained from friends, relatives, neighbors, and dry cleaners at no cost to you.
 - Candy, such as Brach's Starlight Mints, red and white striped, with double end twist wrap on them. Candy can be purchased wholesale and in bulk quantities from candy distributors.
 - Curling ribbons (red and white) and plastic bags which can be purchased wholesale from your local paper products supplier.
- Other items needed are heavy pliers and wire cutter to bend and cut out the coat hangers. Small amount of white and red yarn.
- Instructions:
 - Weight out candy into two pounds per bag.
 - Cut red and white curling ribbon into 9-inch lengths, tie one piece of ribbon onto each piece of candy, about the middle of the ribbon with a single knot, mixing red and white ribbons.
 - Straighten all bends and kinks of hanger up to the twist. Now twist the top twist TWO OR THREE TURNS TO MAKE TOP OF HANGER HOOK TO BOTTOM OF TWIST, 5 1/2 inches.

Bend hanger into shape of heart — 12 1/2 inches from top of hanger hook to bottom point of heart.

- Tie candy — which ribbon has been tied onto previously — onto heart-shaped hanger with a double knot, until it is completely filled with the two pounds of red and white candy.
- Curl ribbon ends which extend from candy with a scissors or blunt-edged knife.
- Wrap hanger twist and hook with red or white yarn.
- Tie small tag onto hanger hook or twist with organization name and telephone number so people will know who to contact to order or reorder candy hearts from.

NOTE: Bending of heart shape into hanger may take a couple of practice tries to get the idea and a good looking shaped heart. Can also use a wooden cut-out heart jig.

Recipe Corner

Send your recipes to the editor, Ed Bryant. He is the official taste tester and needs recipes to test his taster.

Granola

Mid-West Treatment & Education Center, Columbia, Mo.

Ingredients:

1 shredded wheat biscuit
2 cups rolled oats
1/4 cup finely chopped nuts
1/2 cup regular wheat germ
1 teaspoon cinnamon
1/4 teaspoon salt
1/4 cup melted margarine
1/2 cup seedless raisins
45 grams peach or apricot halves (dried)
1/4 cup raw bran if desired
Preheat oven to 350 degrees.

Crush shredded wheat and combine with rolled oats, wheat germ, bran, nuts, cinnamon and salt in a 13"x9" baking pan, mix well.

Pour melted margarine all over, mix well.

Bake 25 minutes, turning over twice.

Meanwhile steam raisins to moisten.

Cut dried fruit halves in very small bite-size pieces.

When cereal is toasted, remove from oven, add fruits, mix thoroughly.

Let cool and store in tightly covered container.

Makes 3 3/4 cups. 1 serving (1/4 cup) equals 1 Bread + 1 Fat.

120 calories per serving.

Sugarless Cookies

Gertrude Bryant, Columbia, Mo.

Ingredients:

1 cup raisins

1/2 cup dates
1/2 chopped apple
3/4 cup chopped nuts
1 cup water
1/2 cup veg. shortening
2 well beaten eggs
3 tsp. Sweet-10
(artificial sweetener)
1 tsp. vanilla
1 tsp. soda
1 cup flour

Boil dates, raisins in water for 3 minutes; add shortening to melt, then cool; add rest of ingredients with nuts at last; mix well and re-frig. until well chilled; drop by tsp. into cookie sheet.

Bake 350° 10-12 minutes.

Refrig. air tight container. Good for one on a high protein diet.

I use whole wheat flour, and a little cinnamon and nutmeg.

Yield, Number of servings: 2 dozen; Each cookie: 113 calories. Diabetic Exchange: 1 Bread, 1 Fat.

Quiche Loraine

Gail Bryant, Columbia, Mo.

Bake or have a ready made pastry crust with fluted edge. Fry 1/2 lb. bacon until crisp; cut into small pieces. Arrange with 1/4 lb. cheese in crust. In a bowl mix:

3 eggs
2 cups whole milk
1/2 teaspoon salt (optional)
Dash of pepper
1/4 teaspoon Worcestershire sauce, and other seasonings if wanted

Beat and pour into pie shell. You may wish to add other desired vegetables when bacon and cheese are added to the pie shell.

Bake in 400° oven for 35 to 45 minutes or until knife inserted in center comes out clean.

Yield, number of servings: 8; calories per serving: 290; Diabetic Exchanges: 1 Meat (medium fat), 1 Bread, 3 Fat.

come involved.

My parents offered to build an extra room onto their home so that I could live there. Although the offer was loving and gracious, I wouldn't even have considered such a thing. I had always been a very independent person and I thought if I moved into my parents' home, which was on a rural route, I would be more or less trapped since there was no bus service and the cost of a taxi to the country was astronomically expensive. I couldn't expect my parents to provide me with transportation to anywhere I might desire to go. After all, they had a life of their own. Besides, I was a very active person and was used to travelling all over my community. I decided to remain in my apartment as I had no reason to depend on others to do the things I had always done.

My biggest problem was not being able to draw up my own insulin. My mother drew up a seven-day supply which she renewed weekly. This was done for three or four years, until I found there were devices on the market that enabled blind persons to accurately draw up their own insulin. This, in effect, meant I could manage my own disease.

My blindness made me feel anger and frustration because I felt trapped and limited in what I could do. I decided I was being stupid because facts are facts and the fact was, I was blind. After a while, it seemed unreasonable to quit trying and not be independent because I could not see. I then realized, in actuality, I was not limited. In my apartment I did not need to see because I knew where everything was. With a little ingenuity, I discovered I could cook and do anything in the kitchen I desired. Everyday, I discovered many alternative techniques that allowed me,

as a blind person, to do things just as proficiently as I did when I was sighted.

I telephoned Missouri's Bureau for the Blind to let them know I was blind and I needed a long white cane and someone to show me how to use it. After waiting two or three weeks, I grew increasingly angry because I could not be independent if all I could do was sit in my apartment. One day I took my hatchet and kitchen broom and went outside, using my broom for a cane. I headed for a spot where I knew a little tree was located. I chopped off a long branch. After returning to my apartment, I chopped and whittled on the branch until it developed into what I called a cane. I didn't know anything about cane dimensions; but, I figured the cane should be about as tall as I was. I ended up with a make-shift cane that was about six feet long. I went for short walks. I chuckle now as I recall that I was probably a danger to society with my tree branch cane. I was a danger to myself because the end of the cane kept getting stuck in the ground and I almost ruptured most of my midsection on many occasions. Even though my tree branch cane wasn't an "innovative" device, it allowed me to travel all around the complex where I lived, which had several different roads. I had all the confidence in the world, even though I realized I was travelling quite slowly. I had to get a better cane. At last, a man from the Bureau for the Blind showed up and brought me a cane. The top of the cane came somewhere between my navel and breast bone. When I attempted to walk with it, I had to bend over.

After he left, I went for a walk using my new cane. I could do much better with the cane than I could do with the tree branch, al-

though, to me, the cane was obviously far too short. I knew where the city bus stopped so I took a bus downtown and spent the afternoon exploring. I never had any formal mobility lessons so I trained myself with few difficulties.

At this point, I moved to the downtown area primarily because there were sidewalks, plus I lived in a high-rise apartment where there were many people to converse and socialize with. The apartment was close to the University where something was always happening. At some point, I found out about the National Federation of the Blind (NFB). After attending a few meetings, I was, without doubt, more impressed with it than any other organization I had been involved in. I was impressed because it was a united body of organized blind people who do everything possible to serve all blind people, no matter what the cause of the blindness might be. NFB philosophy ran parallel to my own regarding observations I had made since going blind. Most of the general public simply do not understand blindness. Many friends, neighbors and family simply pity the blind person and think he/she is incapable or incompetent of doing very much. Even though there is great pity and sympathy, there is much discrimination against blind people. Myths and misconceptions help postulate a pervasive conviction about the abilities of the blind and that leads to discrimination. NFB is a self-help organization and proves daily that inability is not synonymous with blindness.

We in NFB are cognizant that with proper training and use of alternative techniques we can do almost anything we desire. The stereotyping of the disabilities of the blind are so traditional and em-

bedded in the societal mind, that many blind people think they can't do things, such as cook, clean house, travel, etc. This also holds true for the blind or visually impaired diabetic, who sometimes thinks that he/she cannot draw insulin, etc. The key word is education. NFB strives to enlighten society about the capabilities of blind persons. And the NFB strives to change the way that many blind people think about themselves. Many people, when faced with a severe eye problem, think only about what they can't do as opposed to what they can do. The limitations of most blind persons are self-imposed.

The Diabetic Division of the NFB was set up to be a support and information network and to assist persons undergoing any chronic diabetes complication. This newsletter provides a place where our members' voices can be heard and experience can be shared with our brothers and sisters. If a person needs an ear to listen and understand, a place to obtain information, or if he/she wants to contact someone who has undergone the same experiences as himself, then the NFB Diabetic Division can most certainly handle these needs. We are upbeat and accentuate the positive. There is absolutely no need for someone who has a diabetic complication to curl up in a corner and hibernate, which in effect makes a person become sheltered or totally dependent.

I believe a publication such as Voice of the Diabetic has long been needed in America. We are growing rapidly and have more than tripled in membership since our inception as the NFB Diabetic Division approximately 1 1/2 years ago.

Smile and have a good day. That's how I see things today.

What Is Diabetic Retinopathy?

by Ed Bryant

This article is based on a presentation on diabetic retinopathy by Dr. Timothy Holekamp at a monthly American Diabetes Association (ADA) meeting. The Ophthalmologist and Retina Specialist spoke to a group of diabetics and interested parties in Columbia, Missouri, on February 11, 1986. In speaking to this group, Dr. Holekamp was concerned with explaining the likelihood of their contracting diabetic eye diseases. He opened with a history and definition of the condition.

"Diabetes is a large health problem in America today. It is the most common cause of all new cases of blindness here. The reason is not that all diabetics go blind," he explained. "It's because many diabetics happen to be at risk for the condition."

Dr. Holekamp described the situation as it was ten years ago when almost every person who had suffered with diabetes for twenty-five years showed retinopathy. But today there's new hope. He described two general situations. In the first case, the doctor has seen two to three patients with diabetes for more than thirty years who *show no signs of retinopathy*. In the second situation, newly diagnosed diabetics may never get retinopathy because they learn to *control their diabetic conditions* from the beginning. These hopeful situations contrast with the less optimistic ones: there are many lifelong diabetics who haven't managed to get their conditions under control. They remain at risk.

"It doesn't mean half of all long-term diabetics will lose their sight from retinopathy. It means that all diabetics should pay attention to their conditions because of the statistical likelihood favoring their chances of contracting clinically diagnosable retinopathy," said Dr. Holekamp.

In order to determine the chances for having retinopathy problems, Dr. Holekamp distinguished between the different types of diabetes for his audience. He divided patients into three groups. In the first group are patients with juvenile-onset diabetes: anyone who contracts diabetes before thirty. "During the first decade of their disease, it's highly unlikely they'll develop clinically significant retinopathy. If you're a juvenile diabetic for ten years or less, you have a 10 percent chance of coming down with retinopathy," remarked Dr. Holekamp.

The figure soars for patients who have had diabetes fifteen years or more. "In fifteen years, it soars to 73 percent," explained the doctor. "In fact, when people contract retinopathy from age thirty to fifty-

nine, it may just be the late juvenile or early adult onset. But the percentages of disease (at that point) are that much higher. This group (onset age thirty to fifty-nine) tends to sort out closely with adult onset or maturity onset diabetes. What it means is that in the decade, one-third of this group demonstrates diagnosable retinopathy. So, in fact, their numbers are quite different from juveniles. What may have happened is that many people in the latter two classifications were diagnosed for diabetes very late: after much vascular damage had already been incurred. What's clear, is after you've suffered from diabetes for fifteen years or more, the chances you have of getting retinopathy are pretty high."

Dr. Holekamp took time to explain the structure of the eye to facilitate his explanations. "You only see the front portion of the eye, but there's a lot of structure inside the socket," he noted. "The eye is round and hollow. It is essentially like a camera. Cameras were modeled after eyeballs. They have square corners instead of round edges. There's a front focusing device. The lens of the eye and the cornea together are responsible for focusing the image: the light rays come into the eye through the pupil. The pupil is an aperture that can be opened in dark illumination and closed in sunlight to control the amount of light entering the eye. The world's image focuses on the retina, a membrane lining on the inside back wall of the eye. It's in the same location as film in a camera," he explained.

Dr. Holekamp told how the retina's job is to convert the picture of the outside world — light rays — into electrical signals that can be transmitted to the brain through a nerve that exits through the back of the eye. This is the optic nerve and it carries information in one direction from the eye to the brain. The retina is "fed" by two sets of circulation, the retinal circulation and choroidal circulation. Dr. Holekamp pointed out that the retinal circulation is important to the discussion. "The retinal circulation starts as a single blood vessel, a little arteriole entering the eye through the back opening where the optic nerve begins. It branches out and feeds into the whole retina until it breaks down into tiny capillaries and carries the blood into the tissues. It's at that capillary level that oxygen and blood are transported into the retinal tissue. Afterward, the same blood picks out by-products and carbon dioxide. It is drained back out of the eye and re-collects into a vein that exits at the same site into two large blood vessels: one entering and one exiting at the same place. But the reti-

na differs from the film in a camera in one important way. Film is the same all over: standing over on the side of a picture is equally as clear if you're in the middle of the picture. But the retina is different. The retina has a center called the macula, which is much more sensitive to details than the retina's outer edges. An individual's normal vision is centered in the macula. That's why we must aim our eyes at what we want to see. It's so the image of the thing we're looking at will align with the macula, in the center of the eye. But less than 5 percent of the retinal surface is represented by the macula. The major percentage of the information your brain makes sense of comes from that small spot. So it must be protected. The macula's center is the fovea, the actual location of our 20/20 vision." After explaining this, Dr. Holekamp felt his audience had the background to understand the following explanations.

"Retinopathy can be divided into two forms. Some people have both forms; but most suffer with only one. The more prevalent form is called background diabetic retinopathy. When it damages vision, it's called maculopathy, or disease of the macula. Maculopathy involves fluid leaking from damaged capillaries: the network of blood vessels covering the *retinal* tissue. This leakage causes the area around the retina to swell. Fatty materials that leak from the damaged vessels collect, forming a yellow exudate. That, in itself, is not the damaging factor. It only shows evidence of chronic edema from fluid leakage in the retina. The result of diabetic maculopathy is blurred center vision when there is a fair volume of fluid collected at the center of the macula, or the fovea. A person's vision can be knocked out quite a bit," Dr. Holekamp discussed this with a chart to illustrate his explanation. He pointed to many little hemorrhages, which resemble tiny red dots, called "microaneurysms." They're not the kind that affect vision.

"Blood vessels undergo several kinds of damage. Sometimes they get blocked; sometimes they leak. Sometimes they develop little sacks of outpouching like a hernia of blood vessels. Leaky blood vessels or microaneurysms are the cause of diabetic maculopathy. But there's a second kind of problem, one which shows up at a later stage of diabetes. This second kind of severe eye problem shows up in an individual with substantial metabolic abnormalities: a severe loss of control, failure and other electrolyte problems. So the second kind of eye trouble relates to the chronic metabolic difficulties of a diabetic. Added to leakage of the little blood vessels is the frequent thickening of vessel walls and other substances added to the

blood causing it to clot inside an already damaged capillary. This shuts off the blood flow to a particular tissue. If that happens in many areas over the surface of the retina, it suffocates. Interestingly, the retina can send off a chemical which has not yet been fully described. This chemical seems to stimulate the growth of new blood vessels which is recognized in diabetic proliferative retinopathy. At some location on the retina, new blood vessels grow or proliferate from the old ones in an uncontrolled manner. The vessels are harmful to the eye. They grow right into the hollow center part of the eye where they're pulled on by the vitreous jelly there. They break and cause hemorrhages, filling the eye with blood. As a result, an individual may lose his sight entirely. This condition is called 'proliferative diabetic retinopathy' because blood vessels and scar tissue proliferate throughout the eye. This problem is rare but serious, since it causes the individual a serious loss of vision." The doctor noted there is treatment for the disease if it's caught soon enough to limit the destruction to the eye.

"Scar tissue accompanies the growth of new blood vessels and hemorrhages. The scars grow across the retina's surface and contract. The contraction causes what is called 'retina detachment.' It causes an extreme vision loss at that stage." The doctor proceeded to describe what treatments exist for the various conditions. "For maculopathy (leakage of fluid causing blurred center vision), it's essential to control high blood pressure. High blood pressure and poorly controlled diabetes impact on each other additively. The impact of the two together is much worse than the influence of one alone. So controlling high blood pressure with medication is very important."

Dr. Holekamp proceeded to speak about controlling diabetes. "One problem of control in the disease is bringing down the level of serum lipids, or fats, in the bloodstream. Photocoagulation or laser treatment helps certain patients. Laser treatment helps in fluid leakage of maculopathy and the proliferative form of the disease. Patients suffering from both conditions can be treated by laser photocoagulation. Previously, only a small percentage of patients whose blurred vision came from diabetic maculopathy benefited from laser treatment. But improvement of the technique has increased the success rate as well. The patient most recommended for photocoagulation treatment is one whose eye has lots of exudate, some hemorrhage and lots of edema in the center. A doctor can evaluate such a condition with a 'fluorescein angiogram.' This test produces a set of photographs

from injecting dye into the patient's arm. The dye travels to the blood vessels causing visible leakage where the damage exists."

Dr. Holekamp continued to discuss the risk ratio for contracting maculopathy or proliferative diabetic retinopathy. He identified particular factors increasing the likelihood of a diabetic contracting retinopathy. Length of diabetes is an important factor. Anyone who's suffered from diabetes 15 years or more should have his eyes checked annually.

He continued, "Uncontrolled hypertension is another important factor. Genetic inheritance still seems important. A diabetic with someone else in the family who has diabetic retinopathy is more likely to have vision problems. People suffering from diabetic kidney disease which is serious enough to require a physician's care are more threatened by retinopathy. Patients with enough vascular damage to require an amputation are more prone to retinopathy. Another health problem relates to suffocation of the retina or retinal ischemia. We've already discussed the cause of proliferative diabetic retinopathy, where new blood vessels grow uncontrolled over the retinal surface. Anything reducing the delivery of oxygen to the eye tissue will induce the production of the chemical stimulating the growth of harmful new blood vessels in the eye."

Dr. Holekamp warned, "Smoking cigarettes produces a condition where the smoker's red blood cells (hemoglobin) become partially bound to carbon monoxide. The carbon monoxide binds to the hemoglobin, depriving it of oxygen. For every bit of carbon monoxide that binds to hemoglobin, it diminishes the amount of oxygen that can be transported to the tissues. The second negative effect of cigarette smoking is increasing the stickiness of small cells in the bloodstream called platelets. Platelets help the blood clot when it needs to by forming tiny clumps that produce clots to stop up broken or torn blood vessels. They usually flow smoothly through the bloodstream until something signals them to start sticking. Smoking cigarettes causes clumps (or aggregates) of platelets to clog up the already damaged blood vessels in a diabetic suffering from retinopathy. This clotting may shut down blood flow to the retina. By decreasing the amount of oxygen transported to the retina, you increase the likelihood of stimulating an attack of proliferative diabetic retinopathy. These are the two mechanisms by which cigarette smoking decreases the amount of oxygen transported to the retinal tissue."

The doctor commented, "American laws prevent us from testing

these theories fully in the United States. But the Canadian system of socialized medicine facilitates such practical research. It's easy to study diabetes in Canada because everyone in a region attends the same clinic for medical care. So first you go to one town and identify all the diabetics. Then you collect all their records and arrange personal interviews by visiting them at home or at the care giving institute. They did that in Canada. They assembled all the diabetics in a region and tested them in a variety of ways for proliferation retinopathy or maculopathy. They asked how long they had diabetes. They recorded accurate data, including their smoking histories. Then the researchers loaded the information into a computer and 'shook it up.' What emerged was very interesting," Dr. Holekamp stated. He explained that the results showed a high correlation between 'pack-years' (how much one smokes) and incidence of proliferative diabetic retinopathy.

Dr. Holekamp stressed the importance of statistically significant data. "Among non-smokers, however, there was no correlation between length of time the patient had diabetes and the incidence of proliferative disease."

He added, "It may be, by measuring 'duration' we're actually measuring how long people have smoked. We may have misinterpreted the especially high correlation among smokers between duration of their diabetes and proliferative retinopathy."

Dr. Holekamp repeated the major observation: "Diabetic smokers are much more prone to

contract proliferative retinopathy because smoking interferes with oxygen transport."

He led into the next subject: he first wanted to talk about a new technique for treating a less severe form of diabetic retinopathy published by a colleague. He was concerned here with diabetic maculopathy.

"In some patients, you can simply see the leakage well enough to treat it, but others leak everywhere. Since treating all the blood vessels would destroy too much tissue, in earlier times these patients were not treated for their maculopathy. Instead, they were treated to improve their metabolic status. This new treatment is not with any new machinery. It's the same old laser but it's done in a grid pattern: just zap, zap, zap all the way across the macula. The pioneering physician had guts enough to test this technique on many patients at once. As a result of his research study, he proved that patients receiving this grid pattern laser treatment on the macula end up having better vision than those receiving no treatment at all. As a result, on patients who have this one diffuse form of leakage, this grid-form of treatment is being done."

In the following part of his talk, Dr. Holekamp dealt with treatments for the most severe forms of retina scarring and leakage problems. He spoke of surgery techniques which were greatly improved during the last decade. He highlighted an operation called 'vitrectomy.'

If it's done at the right time, coupled with proper laser treatment, it

can stop the problem and correct it (enough) so patients can maintain their vision or even regain quite a bit.

"There are exceptions. Many times we'll see a patient for the first time when proliferative disease is far advanced. Their vision may already be severely impaired. Even after the best corrective treatment, damage to the eye continues. In most of those patients, all the blood vessels in the retina have already been so badly damaged by the patient's long history of poor diabetic control, there's really no chance for a complete recovery. We can't repair already destroyed blood vessels," Dr. Holekamp stated.

"What we're doing now is trying to catch the disease earlier, by convincing people of the certainty that diabetic control stops the progress of this damage. Bringing diabetics with retinopathy under good control tends to stop the process. Even for people with a 10-15 year case of diabetes, their condition may not worsen."

Dr. Holekamp stated that he has treated a large number of patients who have had severely rigidly controlled diabetes for many years, and their condition hasn't worsened, even though they had the worst form of this disease when they first came. "So there is hope; the disease can be stopped, if there are still functioning blood vessels that can be saved when it's caught, things can be done to prolong useful vision."

Dr. Holekamp thinks that in the future, this problem will be solved with techniques to improve diabetic control.

FORM FOR SUBSCRIPTION, DONATION OR MEMBERSHIP

Membership in the Diabetic Division of the National Federation of the Blind (NFB) costs \$2.00 yearly, tax deductible. However, production costs for Voice of the Diabetic run about \$6.00 per year for each subscription. Members are invited and non-members are requested to cover this cost. If you wish to join the NFB Diabetic Division, subscribe to Voice of the Diabetic, and/or make a donation, please mark the appropriate boxes and fill in the blanks below.

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What You Always Wanted To Know But Didn't Know Where To Ask

(Resource List)

With over 50,000 members, the National Federation of the Blind (NFB) is the largest organized group of blind people in the world. The NFB has accumulated lots of information on all subjects relating to blindness. You are cordially invited to contact the National Federation of the Blind with any questions that you might have. We are located at 1800 Johnson Street, Baltimore, MD 21230. Our phone number is (301) 659-9314.

We do not endorse these products and/or materials, but we are simply stating their availability.

EQUIPMENT

1. Talking Blood Sugar Analyzer: The Accu-Chek Blood Glucose Analyzer can be converted so that it has verbal output. The Digi-Voice Speech Module has a clear voice and it does not affect the operation of the Accu-Chek. Cost of the Digi-Voice Module is \$445.00. Units for adaptation, new or thoroughly cleaned, should be sent with a check or purchase order to:

Science Products
Custom Electronics
1043 Lancaster Ave.
Berwyn, PA 19312
Phone: (215) 296-2111

If preferred, Science Products will supply the Accu-Chek unit for \$188.00. The company has a catalog listing all products.

2. Sleep Sentry: This device, worn on the wrist, is intended for use by insulin dependent diabetics who have insulin reactions while asleep and don't wake up, or don't wake up soon enough to help themselves. The cost is \$175.00 each. (Virginia residents please add 4 percent tax.) Order Sleep

Sentry from:

Teledyne Avionics
P.O. Box 6098
Charlottesville, VA 22906

3. Money Organizer Wallet: It is lightweight, has four separate compartments for bills, four separate coin slots, an extra compartment which can hold items such as a small slate, check book, signature guide or charge slips and slots for credit cards. An order form is available upon request. Cost is \$25.00 per wallet. (Massachusetts residents please add \$1.25 tax.) This item might be good for persons with neuropathy. Order it from:

Innavision
14 White Pine Knoll Rd.
Wayland, MA 01778
Phone: (617) 235-2606

4. Inject-Aid Syringe/Vial Holder: This device claims to be good for visually impaired people and those with shaky hands. It sets the dosage accurately and combines the vial and syringe into a single, steady, easy-to-handle unit. It is designed for all lengths of syringes. For two types of insulin mix, simply use two Inject-Aids set at correct dosage. The price is \$5.95 each. Vial Center-Aid is a device that guides the needle into the vial. Price is \$3.30. Order either of these products from:

George Wright Industries
82 W. Lakeshore Dr.
Lincoln, NE 68528
Phone: (402) 477-1382

BRAILLE MATERIALS

1. ABC Calorie Counter, Basic Health Publications, 3 vols., 234 pages. From Braille Institute (as below).

2. Insulin Self-Injection Techniques, Becton-Dickinson, 4 pages. Thermoform braille materials are 9 cents per page and 75 cents for each volume for the binding and labeling. Available from:
Braille Institute
741 N. Vermont Ave.
Los Angeles, CA 90029-3594
Phone: (213) 663-1111

PRINT MATERIAL

1. Aids and Appliances Review, June 1982 newsletter, describes several devices for measuring insulin. Write to:

The Carroll Center for the Blind
770 Centre Street
Newton, MA 02158
Phone: (617) 969-6200

2. Self-Urine Testing for Ketones is a thin booklet, costing 50 cents, which has much information about ketones. Ames also has several other helpful booklets.

Ames Division
Miles Laboratories, Inc.
P.O. Box 70
Elkhart, IN 46515

3. Diabetes: The Glucograf Method for Normalizing Blood Sugar is written by Richard K. Bernstein, M.D. It has 294 pages. Dr. Bernstein, a type I diabetic for 40 years, is known as "the tartar of tight control." His scientific method requires six self-tests a day, multiple

injections of insulin, and a high-protein diet. This pioneer book is of great value to type I diabetics who are tired of the bouncing blood sugars and are ready to take charge of their diabetes in order to prevent complications and to feel their best 24 hours a day. Catalog No. 9055. Cost: \$8.95. To order the Bernstein book, write or call the following:

Sugarfree Center, Inc.
Van Nuys, CA 91408
Nationwide: 1-800-972-2323
California: 1-800-336-1222

CASSETTES

1. Diabetes '86 is a quarterly publication from the American Diabetes Association, Inc. Check with your State Library for the Blind and Physically Handicapped to see if they provide this publication. If not, you can contact:

South Dakota Library for the Blind
and Physically Handicapped
ATTN: Brian Lopez
800 Illinois St.
Pierre, SD 57501

2. A Gift of Life by Alfred W. Becker, copyright 1983. The author is blind, had kidney and pancreas transplants and tells of his successful adjustment to having diabetes. This tape is available from State Libraries for the Blind and Physically Handicapped.

Tidbits and Humor

Diabetic Support Groups

If you know of any diabetic support groups in your area, please contact us. We need to know about the group and who its leader is, with the correct address and phone number, if possible. We would like to have an interchange of ideas and experiences between the many diabetic support groups. We feel, by working together, much more support can be provided to all diabetics.

Braille Calendars

To receive your complimentary 1987 Braille Calendar (5½"x6½"), please write to the American Brotherhood for the Blind, 18440 Oxnard St., Tarzana, CA 91356.

Jokes and Riddles are provided by Frances Allen, Columbia, Missouri.

Q: Why did the boy cut a hole in his umbrella?

A: So he could see when it stopped raining.

Change of Address

Please notify us of any address changes. We must have your correct address to insure that you receive your newsletter as bulk-rate mail is not forwarded.

Q: What do you call a sleeping bull?

A: A bull dozer.

Let Us Know

Extra copies of Voice of the Diabetic are available for use in seminars and for members to distribute to interested parties. If you need extra newsletters, please contact your editor letting him know how many are needed and how you plan to use them.

Thank You

We send thanks to the Columbia, Missouri Chapter of the National Federation of the Blind. It allows our division use of its bulkrate mailing permit, which saves us money. Again, to Federationists in Columbia, Missouri we say "Thank You."

Q: What did Adam say before Christmas?

A: "It's Christmas, Eve."

Make Your Voice Heard

Since I, as your editor, am ultimately responsible for this publication, I need to know of any foul-ups or goofs. I also welcome any suggestions, recommendations and/or criticisms. We invite you to send questions to Dr. James, recipes for the Food Corner and articles that would interest our readers. Send your great ideas to:

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